

HAWDON MOHUA MONITORING, 2016/2017

Marion Rhodes

BACKGROUND

In the 1970s the Hawdon was a great place for the average bird enthusiast to see mohua, being an easily accessible valley with good numbers of this South Island bird. Graeme Elliott recalls tramping here as a teenager, and being able to count on seeing and hearing these birds (pers. com.).

In the 1980s four surveys of mohua were done in the lower Hawdon from the terraces immediately upstream of the East Branch to the bottom of the valley, on both sides of the valley (an area of approximately 500 hectares). Between 31 and 40 birds were found in each of the four surveys undertaken between 1983 and 1986. In 1986, the year for which I have a copy of the report written by Colin O'Donnell, 34 birds were found. The majority of these were on the true right of the river, below the confluence with the East Branch, while the remainder were found in the terrace area of what is now called "Eastern".

By the time I first started working in the Hawdon, in 2004, numbers had dropped perilously low – you could generally count on hearing one, or maybe two males singing in the mid section of the valley, if you spent enough time there. During the summer of 2007/8 the OFP team found a pair feeding 3 fledglings in "Eastern", and at least 3 other single birds were recorded in the valley. Over the next 4 seasons a single nest attempt was recorded each summer in the valley; most years the outcome of the nest was not known. Each year a couple of "other" mohua were also recorded in the valley – i.e. a total of 4 adult birds were known to be present during this time. From the spring of 2012 onwards no nests were recorded, but mohua encounter records indicate at least a couple of birds in the valley. In early November 2014, a group of us went to Chalky Island and caught 58 birds for release in the Hawdon. The transfer went smoothly, with all birds surviving the immediate transfer process.

2014 was the year of "The Battle for the Birds", with beech masting occurring around much of the country/South Island, and 1080 drops scheduled for many valleys to control rat populations. The Hawdon was one of the valleys scheduled for a 1080 operation, and it was due to occur the week following the mohua release. Unfortunately, due to weather conditions, the drop did not happen until 3 weeks after the mohua release.

Although the OFP team were working in the Hawdon Valley on and off after the release, and casual sightings of mohua were recorded, no concerted effort at monitoring was made until early January, when myself and Robyn Blyth arrived.

Of the 58 mohua released on 6th November 2014, twenty two to twenty four birds were re-sighted in January 2015. The birds were all thought to be in male-female pairs, and 5 of these pairs were known to have produced offspring. A total of 10 fledglings were seen, but

there may well have been more. We believe there was also a single un-banded resident male in the valley this season.

Surveying in the 2015/16 season was followed by nest monitoring. 16 adult birds were found (last season's report states only 15 were seen, but there was a single sighting of -/GG which I discounted... until she was seen again this season). Only 12 of these were banded release birds; the other 4 un-banded birds (3 male, 1 female) all appeared to be first year birds. The 6 family groups we found were followed for nesting success. All 6 first nests were successful. One pair double-clutched and their second nest was still going when we last visited the valley in early January. The outcome of that nest was not known.

2016/2017 Season

Surveying this season was carried out once again by Marion Rhodes and Jo Welsh. We followed much the same format as last season, walking all the rat and stoat lines, including the disused 'B' lines. We each covered all the lines within the valley except for the 'Insanity', 'Knob' and 'One-Tree' lines, which were covered by only one person.

Our first trip to the valley was a 9-day trip starting 17 October; we completed most of the surveying, and found 2 active nests during this trip. It was a surprise to find birds incubating so early in the season, as the Hawdon birds, along with those in the South Branch, are believed to be much later breeders than mohua in other parts of the South Island (pers. obs., also Elliott, 1990). However our first nest had fledged by 13 November, meaning incubation must have started at the very start of October, which is early nesting for any of the mohua populations I have studied!

Our following trip, six days starting 31 October, we completed surveying. We found a total of twenty-five adults, comprising 10 females and 15 males. We also located two more nests this trip. All other pairs in the valley were checked and found to be not nesting at this stage. This trip had been scheduled to be 9 days, but was cut short due to weather.

All our following trips were much abbreviated, and scheduled around weather. They were generally no more than 7 days apart, with the exception of a 2-week absence from the valley at the start of December, when we were in the South Branch. Making use of the staff bivvy in the Hawdon helped us maximise the amount of time spent in the valley.

We checked all nests each trip, and visited non-nesting pairs for signs of breeding, in an effort to find all nests as soon as possible. Unfortunately we had a number of very sneaky pairs, so occasionally we would decide they were nesting, but would fail to find their nest in the time available. Finding these nests then became a priority for the following trip.

We attempted mist-netting in the Hawdon for the first time this season. We were able to catch all the birds we tried for. (We had a female bounce out near HM06, but as she was incubating I had been hoping to only catch the male she was with). We caught and banded seven birds; two females and five males. This meant that by the end of the season there were nineteen banded adult birds of a total of twenty-five. Birds caught this season were given a 'hot pink' plastic band over the metal on their left leg, thus making it easy to distinguish between birds transferred from Chalky (which have only a metal band on their left leg) and those born in the valley.

2016 was a 'moderate to high' mast year for the Hawdon, and although rat and mouse tracking in the valley remained relatively low and was very localised, a 1080 drop was carried out on 30 November. 19,902 hectares was covered at a sowing rate of 2kg per hectare (S. Yong, pers comm). Only one of the 12 nests we followed to fledging was depredated, but as it was still going (young chicks) the day before the 1080 drop and was easily accessible to avian predators we cannot assume that the culprit was non-native.

Maps 1 & 2 show the locations of all birds seen in the valley. Numbers correspond with the information below. Maps 3 & 4 show the location of all nests in the valley.

Territories

1. UB pair, then PM-GO (male) & PM-OO (female)

Sudden

This pair was first seen on 11 October by Simon Elkington. Marion found them again on 24 October at the bottom end of Sudden Block, only 280m from Sudden stream. On 3 November Jo and I caught and banded this pair, along with the single male who roved about Sudden Block. This was the last pair to start nesting in the valley. Their nest (HM11_16/17) was found on 28 November; it had fledged by 7 January, producing 3 offspring.

2. UB, then PM-WB (male)

Sudden

This bird was found singing on his own on 24 October by Marion. He was approximately 500m upstream of the pair mentioned above, but later the same day was seen with them. He was caught and banded with them on 3 November, but subsequent to this was usually seen on his own (or with brown creepers) although remaining in the vicinity of PM-GO and PM-OO's territory until 30 December. At this point he was seen at nest HM13_16/17, being 'scolded' by M/GK. On 7 January he was seen assisting feeding the chicks in this nest.

3. M/RB (male) and M/GK (female)

Sudden

This pair was first seen on 23 October by Jo; they were believed to be nesting. On 24 October we returned to the area and located their nest (HM03_16/17). It had fledged 2

young by 19 November. The pair was re-nesting (HM13_16/17) by 13 December, although we did not manage to find their nest until 20 December. This second nest had fledged by 16 January, apparently producing only 1 offspring.

4. M-PP (male) and M-YG (female)

Unknown

As with last season, these birds were the first pair to nest in the Hawdon. They were found nesting on 22 October by Marion (HM01_16/17), and must have started incubation by 3 October, which is remarkably early. They produced only one offspring from this nest, which had fledged by 13 November. They went on to have a second clutch (HM12_16/17). This is the second year they have double-clutched. This second nest had fledged by 7 January, producing a further two offspring.

5. UB x2 (pair)

Unknown

This pair was located in the top (unpleasant!) half of Unknown block. They were quite sneaky and cryptic. Consequently we did not spend as much time with them as we should have, and did not locate their nest (HM09_16/17) until 21 November, at which stage they were already feeding chick(s). The nest had fledged by 13 December, apparently producing only one offspring.

6. -KW (male), UB (female) & UB then PM-WR (male)

Main

These 3 birds were recorded together from 18 October. The female appeared to be associating most closely with -KW, the older of the two males. However once she started incubating it was the younger, un-banded male who foraged with her and fed her when she came off the nest (HM06_16/17, found on 13 November) while -KW was often several hundred metres distant, busy singing (he often joined the dawn chorus around the bivvy). However -KW was recorded feeding chicks on the nest on 13 December. The un-banded male was caught and banded on 20 November – the incubating female also turned up, and bounced out of the net; we were happy to not catch her, as did not want to put her off her nest. She was quite 'scatty', and nest observations had to be done from "in hiding" up on the next terrace, at quite a distance from the nest, in order to avoid disturbing her. If we were any closer she would take ages to go back on, and then ages to settle, popping back out at regular intervals. The nest had fledged by 20 December, with three offspring seen, and all three adults busy feeding them.

Both PM-WR and the female were heard making distinctly "brown-creeperish" song on several occasions. I first heard the young male making the song on 5 November (convincing enough for me to think I had lost him and was following a brown creeper, until I used my binoculars!); the female was heard making the same song while we were untangling the young male from the mist-net. This initially confused us as to the identity of the bird we had

caught, as we did not expect to hear anything other than chatter, buzz-calls or contact calls from a female.

7. UB then PM-BB (male – ‘Bivvy Boy’)

Main

This bird was first sighted on 18 October singing on his own near the bivvy. He was caught and banded on 5 November, at which point we discovered he was the second male that was sometimes seen with the M-OW & -GG pair near the bike park.

8. M-OW (male) & -GG (female)

Main

This pair was first found on 18 October along with an un-banded male. The female was seen nest-building (HM02_16/17). On 4 November she was nesting, but NOT in HM02. Her nest was located on 5 November (HM05_16/17), about 50 metres distant from HM02. By 29 November she was feeding chicks. When we returned to the valley on 13 December the nest had failed. If my observations were correct on 31 October, when I believed the pair was not yet nesting, the very earliest the nest would have been expected to fledge was 13 December, so nest failure (as opposed to depredation of newly fledged chicks) seems the most likely option. The tree was climbed and the nest was found to be empty, with nothing to indicate what might have happened. The nest was in a slit, with both nest and female visible from the ground. It would have been easily accessible to any predator, including avian. When I followed the pair on 13 December the female was seen going in to nest HM02; she stayed in the cavity for 11 minutes. Incubation had started by 21 December, and the pair was feeding chicks in the nest when we last visited the valley on 16 January.

9. UB pair, then PM-WG (male) & PM-GR (female)

Eastern

This un-banded pair was seen several times during surveying on 19 and 21 October near the beginning of the B line in Eastern. On these two days they were sometimes in the company of a second un-banded male, who we believe was the male who ended up with M-WP. We caught and banded the pair on 1 November. The male was thought to be a second-year bird, with a first-year girlfriend.

They had started nesting by 20 November (HM07_16/17), and had fledged one chick by 30 December.

10. M-BG (male) & M-GB (female)

Eastern

The male of this pair was seen by both Marion and Jo during our surveys, but the female was not seen until we found their nest on 1 November (HM04_16/17), in the same hole as they used last season. On 28 November they were found to have fledged 3 young.

11. M-YB (male), M-WP (female) and UB (male).

Eastern

M-YB and M-WP were seen together during the surveys on 19 and 21 October, behaving like a pair. When they were followed on 1 and 5 November to check for breeding behaviour a third bird (the un-banded male) had joined the pair. On 5 November M-YB was seen feeding M-WP on several occasions, although they were definitely not nesting at this stage. When the nest (HM08_16/17) was found on 20 November the un-banded male was in close attendance to M-WP, escorting her back to her nest at the end of each cycle. M-YB sometimes joined them for her feeding cycles, but was often singing quite some distance away. During all subsequent nest watches the un-banded male was the only male seen at the nest. The nest had fledged by 30 December, and 3 offspring were found with M-WP, M-YB and the un-banded male all in attendance. This is a similar pattern of interaction to nest HM06, with the (apparently) alpha male leaving most of the work to the (assumed) helper male during incubation and brooding phases.

12. UB (male)

Western

This male was seen on many occasions singing on his own in 'Western', around the area where the track crosses the river. On 30 December he was found to have crossed the river and was again singing on his own, now in 'Eastern'.

13. UB (sex unknown)

Discovery

This bird was seen only twice during the season, both times by Marion. The first time was while surveying in Discovery on 21 October. I was at the bottom end of Discovery 'C' line, and heard chatter uphill. I found the bird and was able to identify un-banded legs before it disappeared. I waited a bit but did not hear it again. I returned to this spot later the same day and also 10 days or so later, but heard nothing. Then on 30 December when visiting M-BO and her partner to check for fledglings there was a young-looking (first-year) un-banded bird as well as a fat and fluffy fledgling. The first-year bird was begging lots, and following the adults around, but being chased off by them. It was a lot more agile than the fledgling, and was foraging on tree trunks. I assume this was M-BO's fledgling from last season, although neither Jo nor I had seen it with the adults on any of our earlier nine visits during the season.

14. UB (male) & M-BO (female)

Discovery

This pair inhabited the same territory as last season – the very top end of Discovery, with occasional forays across the river to the top end of Blackball. Their nest was found on 21 November (HM10_16/17), and by 30 December had fledged one offspring.

CONCLUSION

The winter of 2016 seems to have been particularly good for juvenile survivorship, both in the Hawdon and in the South Branch Hurunui. An increase in the population from 16 adults to 25 adults took two years in the South Branch (2010 – 2012), but happened over the course of a single season here. The early start to the nesting season was another indicator of a mild winter, with insect numbers clearly high enough early on to encourage breeding. However productivity was lower this season, with an average of 1.9 fledglings per clutch (based on the outcome of 11 nests), compared to last season where there was an average of 2.67 fledglings per nest (based on 6 nests). Both pairs that double-clutched produced a total of 3 offspring, which 4 other pairs managed from only a single clutch.

It is unfortunate that we don't know the cause of failure of the one nest that failed. The evidence – empty nest and no fledglings – suggests predation of some form. However the nest was still going the day before the 1080 drop occurred, so it seems very likely that the predator was a native bird – morepork, cuckoo or falcon. The nest was visible to any bird flying past, and easily accessible. We had briefly discussed using cameras to monitor mohua nests with Graeme Elliott; however I am a little loath to try this. The single time a camera has been used on a mohua nest (that I am aware of), the nest was abandoned due to the presence of the camera. Given the number of “scatty” females this season, I'm sure that the introduction of cameras would have caused more failures. We had a number of nests (most notably HM02, HM05, HM06 & HM10) where the female was most reluctant to go on when we were anywhere in the vicinity of the nest. I think that the presence of a camera could easily have caused these females to stay away from the nests for long enough for them to fail.

Monitoring nests in only the Hawdon this season (as opposed to both Hawdon and South Branch last season) enabled us to do a much better job of keeping up to date with all the nests. Our two-week absence from the valley at the start of December caused us to lose some data from HM09 (fledged during the second week of our absence), HM13 (incubation started early December) and possibly HM05 (failed at some stage during the 2 weeks), but overall we did a much better job of nest monitoring than last season, with an average of 26 'observation days' per nest (this is the number of days from the nest being found until the last nest check prior to fledging or failing).

While it is pleasing to see the Hawdon mohua population increasing in number under its own steam, **I strongly suggest we look at doing further translocations to this valley.** The population is still so small that a difficult winter could make a significant dent in numbers. There has also been a genetic bottleneck of only 16 birds (? Females). Although the South Branch of the Hurunui went through the same sized bottleneck of 16 birds (? Females), I assume that it is likely to be genetically more robust, as that group of 16 contained birds from 2 mainland populations (the Catlins and original South Branch birds) as well as

offspring of birds from Breaksea Island (originally from ??). I believe the current Hawdon population contains only birds from, or directly descended from, the Chalky Island population, which itself has been through something of a genetic bottleneck.

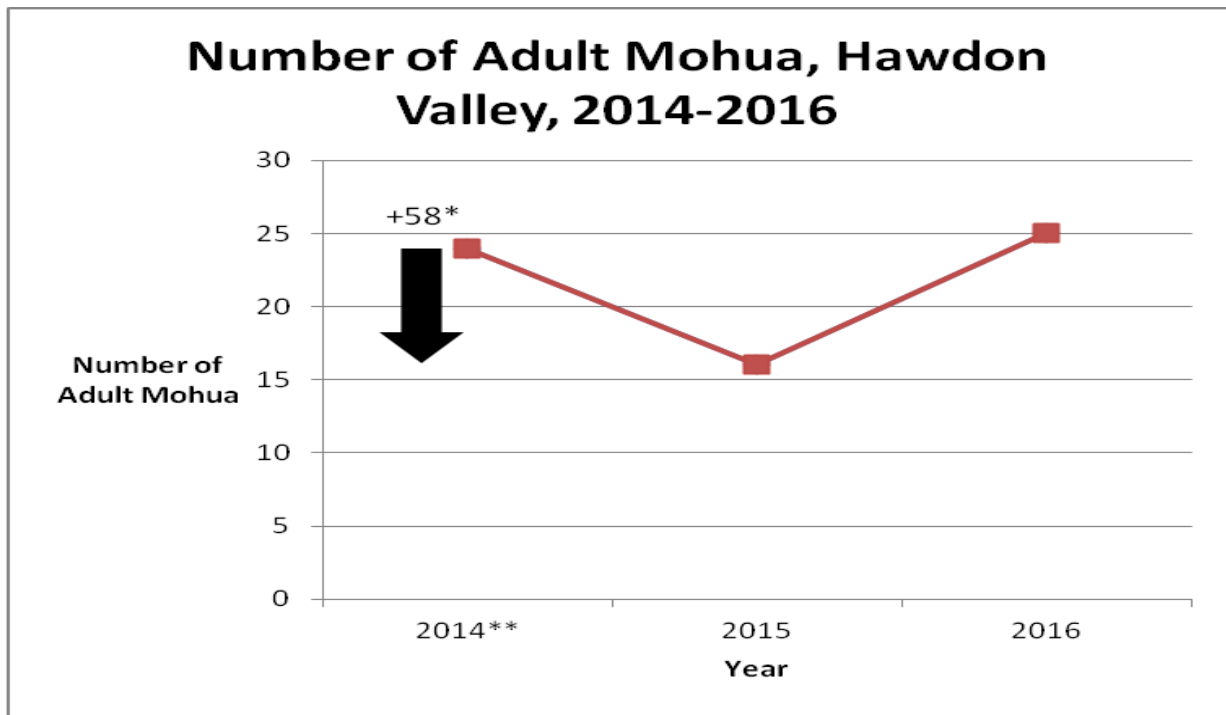
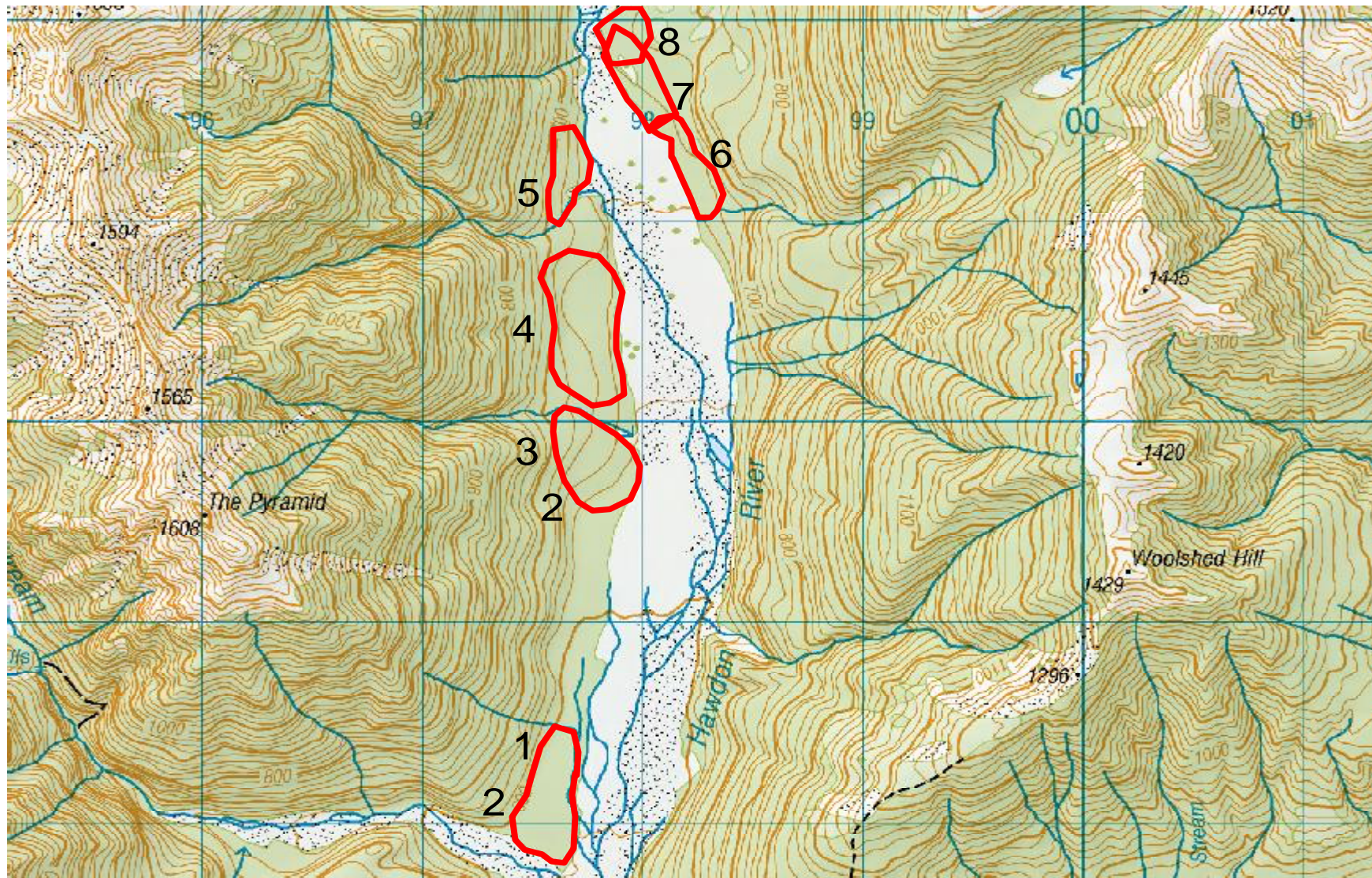


Figure 1: Population trend of adult mohua in the Hawdon Valley, 2014-2016

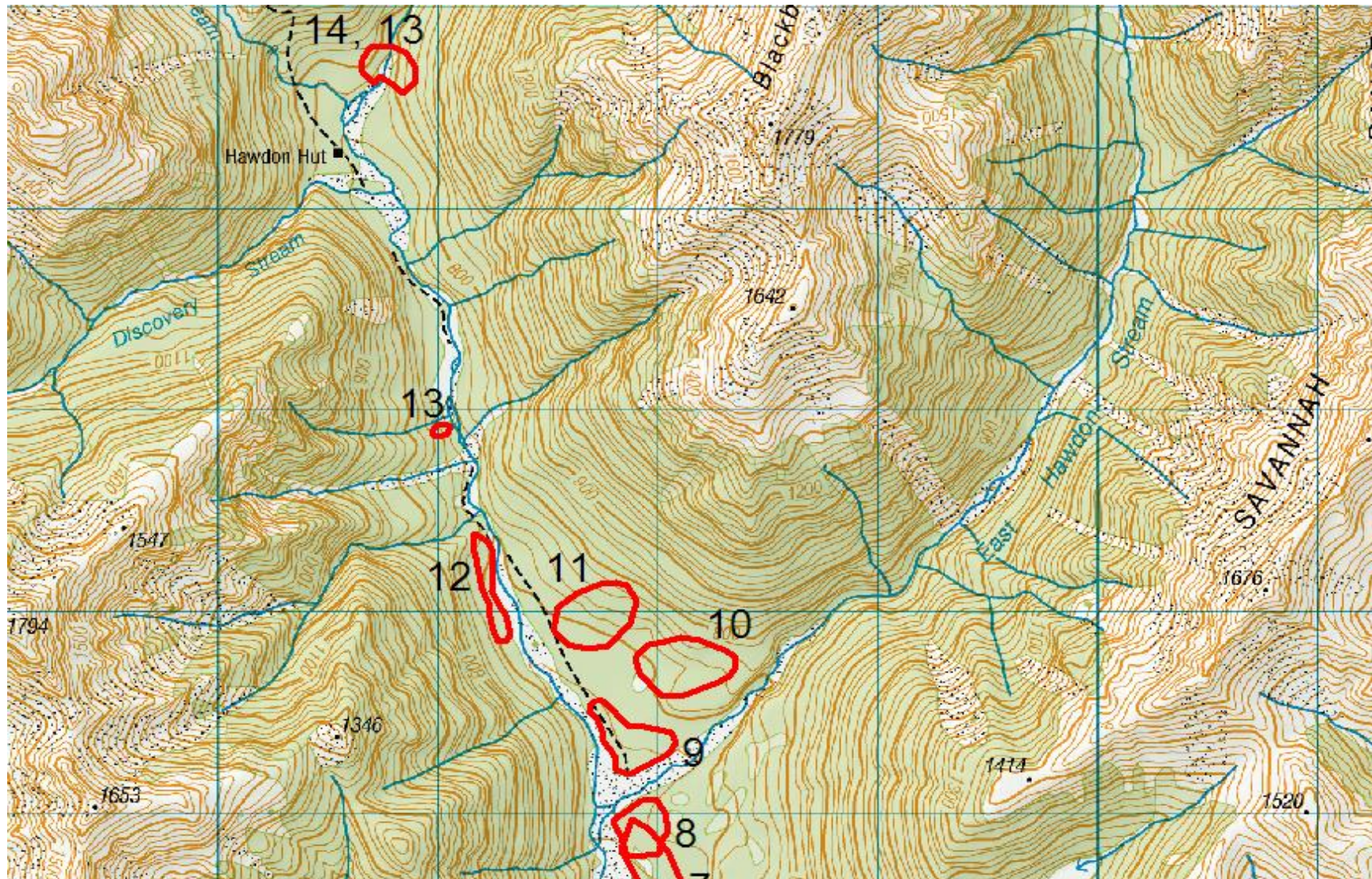
*Indicates addition of translocated mohua, November 2014

**The survey for the 2014 season was carried out in January 2015

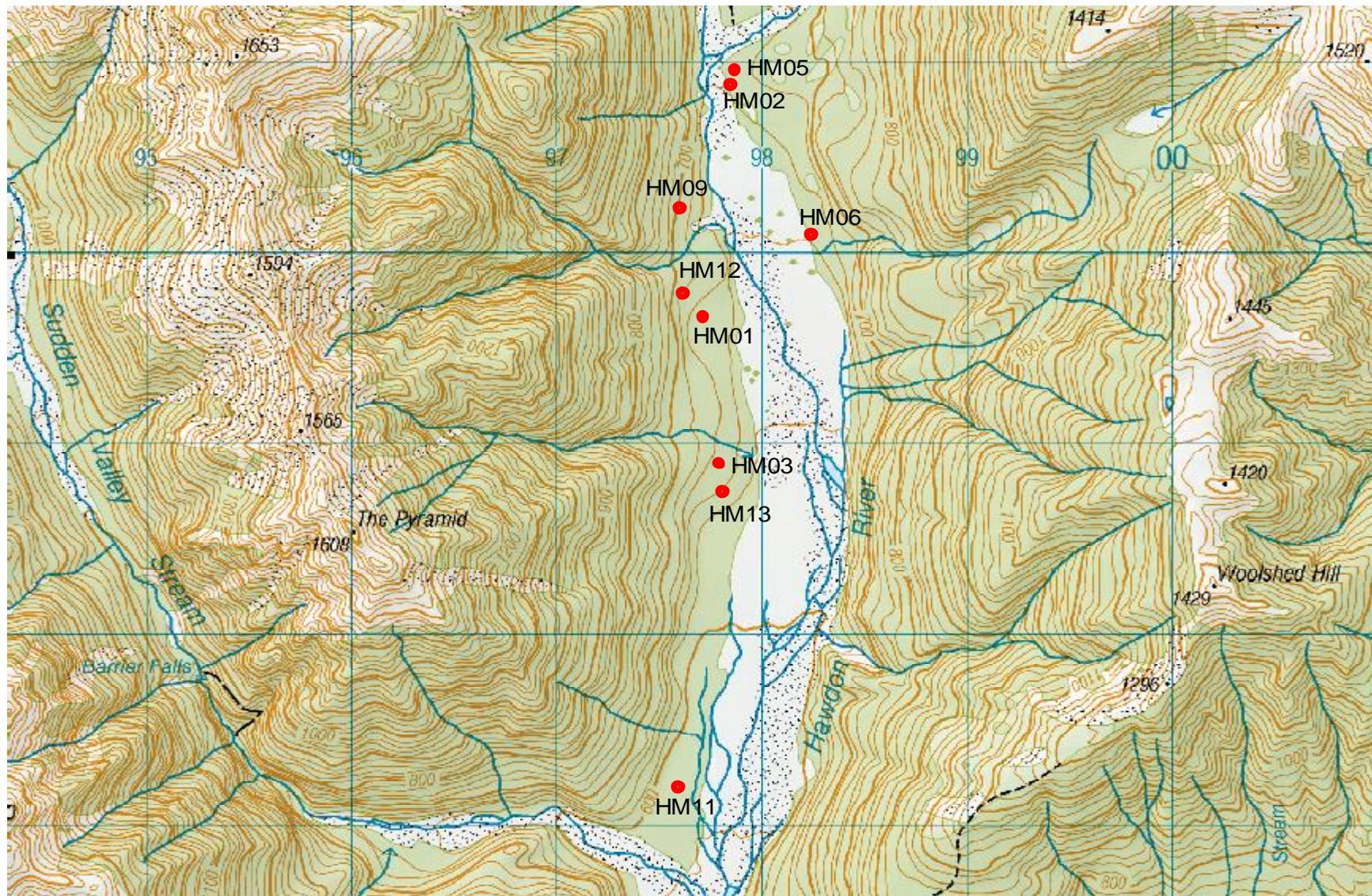
Map 1: Mohua territories 2016/17, lower Hawdon Valley



Map 2: Mohua territories 2016/17, upper Hawdon Valley.



Map 3: Mohua nests 2016/17, Lower Hawdon Valley



Map 4: Mohua nests 2016/17, Upper Hawdon Valley

